Snap Server™ 4500

Industry-Leading Performance for Scalable Departmental Storage

With more than 150,000 servers shipped and more than 60 industry awards, Adaptec is the undisputed leader in Network Attached Storage. Now that leadership is being extended to the IP SAN market, as well, with its Snap Server 4500 that simultaneously supports both block and file data. The Snap Server 4500 is a scalable, rack-optimized 1U storage server that provides industry-leading performance with a best-in-class feature set. Our unique Instant Capacity Expansion (I.C.E.) feature for on-demand scalability and provisioning allows up to two Snap Disk 10 expansion arrays to connect and immediately increase storage space on the fly, with no RAID reconfiguration required. iSCSI target support provides both block and file storage in the same device. Combine all of this with centralized remote administration, no client license fees, and minimal ongoing administration, and it's easy to see how Snap Servers deliver cost-effective capacity without complexity.

A Complete Storage Solution

The Snap Server 4500 offers:

- **Scalable Database Storage —** iSCSI target support allows block-based applications to be stored on the same Snap Server as file-based applications. Now one device handles all of your storage needs.
- **Backup Enhancement —** Fast, disk-based Snap Servers are ideal locations for nearline backup and increase backup efficiency to take maximum advantage of shrinking backup windows. Move data to a Snap Server and scan for viruses, take a snapshot, and pass it to tape over a subnet without impacting existing production servers. Alternatively, install one of the supported backup agents or use NDMP to incorporate the Snap Server data into an existing backup scheme. As an image archive, a backup staging point, or compliance management location, Snap Servers can be faster and more efficient than tape.
- **Scalable File Storage —** Increase storage space on the fly, and share large, frequently accessed files from a Snap Server to speed up application server performance.
- **Enhanced Data Protection —** BakBone's NetVault WorkGroup Edition backup software is integrated into the GuardianOS for enterprise-class data protection. Optional Snap Enterprise Data Replicator (Snap EDR) software provides cross-platform data protection and management designed for the distributed enterprise.
- **Centralized Management —** Simple installation and browser-based management make Snap Servers ideal for remote sites with little or no IT support staff. Snap Server Manager software consolidates the management of multiple units into a single console.
- **Desktop/Laptop Backup —** Every Snap Server includes an unlimited user license copy of Symantec's DataKeeper software for automating file backup and restore of Windows clients.
- **Server Consolidation —** Snap Servers are a simple, cost-effective way to consolidate, yet still provide instant access to, your data.

Key Features

- 1.6TB or 1TB capacity
- Instant Capacity Expansion™ (I.C.E.)
- Scalable to 3.6TB Using Snap Disk 10 Expansion Arrays or 13.6TB Using Snap Disk 30 Expansion Arrays
- iSCSI Target Support
- Hot-Swappable Disk Drives
- Dual-Gigabit Ethernet
- Integrated CA eTrust Antivirus Software
- Active Directory Service (ADS) Integration
- Integrated BakBone NetVault Software
- Backup Agent and NDMP Agent Support
- Ultra2 SCSI for Local Tape Backup
- Snapshot Technology
- Compatible with Symantec V2i Protector Software
- Includes a Windows Desktop/Laptop Backup Utility
- Optional S2S v2 Byte-Level Replication Software
- Optional Snap EDR Enterprise-Class Data Replication, Management, and Protection

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Network Transport Protocols
- TCP/IP
- UDP/IP
- AppleTalk

Network File Protocols
- Microsoft Networks (CIFS/SMB)
- Linux/UNIX (NFS v2/3 over TCP & UDP)
- Apple (AFP 2.0)
- Web (HTTP 1.1/HTTPS)
- File Transport Protocol (FTP)

Network Block Protocols

iSCSI Target Support
- Snap Servers running GuardianOS v3 SP1 or higher

iSCSI Software Initiator Support
- Windows: Microsoft iSCSI Initiator v1.03, v1.04, v1.05
- Solaris: Cisco SN 5400 Series iSCSI Driver v3.3.5
- Linux: UNH-iSCSI Initiator v1.5.3

iSCSI Hardware Initiator Support
- Intel PRO/1000T IP Storage Adapter v2.0, 2.1
- Alacritech SES1001 iSCSI Adapter

Network Client Types
- Windows: 95, 98, Me, NT 4.0, 2000, 2003, XP
- Macintosh: OS 8.x, 9.x, 10.x
- UNIX: Solaris 7, 8, 9; HP-UX 11; AIX 4.3.3, 5.x
- Linux: Red Hat Linux 7.x, 8.x, 9.x

Server Emulation
- Windows 2000/2003
- Windows NT 4.0
- AppleShare
- NFS v2/3
- FTP

Automatic IP Address Assignment
- Supports DHCP for automatic assignment of IP address

Network Security
- CA eTrust Antivirus Software
- Microsoft Active Directory Service (ADS Member Server)
- Kerberos Authentication v5
- CHAP Authentication (iSCSI target level)
- Microsoft Lightweight Directory Access Protocol (LDAP v3 client)
- Windows NT Domain (member server)
- UNIX Network Information Service (NIS) Support
- File and Folder Access Control List (ACL) Security for Users and Groups
- Secure Sockets Layer (SSL) v2/128-bit Encryption
- Transport Layer Security (TLS) v1

System Management
- Browser-based User Interface for Remote Administration
- Snap Server Manager Client-based Setup Utility (platform-independent)
- SNMP (MIB II and Host Resource MIB)
- User Disk Space Quotas for Windows, Macintosh, and UNIX/Linux
- Group Disk Space Quotas for NIS Groups
- Environmental Monitoring
- Email Notification Alerts

RAID Options

The Snap Server 4500 can be configured for enhanced performance or maximum file protection. Options include:
- RAID 5 (drive striping with parity): For each array, the size of one drive is reserved for parity. Provides the best combination of performance and data protection.
- RAID 1 (drive mirroring): One or more drives duplicate one drive for maximum data protection.
- RAID 0 (drive striping): Large virtual drive with data striped across all drives of the array to provide maximum performance with no loss in usable capacity.
- Global hot spare support
- Instant Capacity Expansion (I.C.E.) logically groups RAIDs for dynamic online scalability

Data Protection
- Snapshots: Snapshot technology enables immediate or scheduled point-in-time images of the file system.
- Replication: Optional S2S v2 byte-level replication for nearline backup and recovery.
- Enterprise-Class Replication: Optional Snap EDR simplifies cross-platform management and protection of distributed data.
- Local Backup: Integrated BakBone Netvault WorkGroup Edition.
- Network Backup: Supports VERITAS NetBackup/Backup Exec, CA BrightStor ARCserve/Enterprise, Legato NetWorker, BakBone Netvault, and Microsoft Backup Software for Windows 95, 98, Me, NT, 2000, 2003, XP. Compatible with Dantz Retrospect for Macintosh.
- Windows Clients: Standard Symantec DataKeeper software (unlimited user license) included for backup and restore of Windows clients. Compatible with Symantec V2i Protector Desktop Edition for image-based backup and restore of Windows clients.
- Windows Servers: Compatible with Symantec V2i Protector Server Edition for image-based backup and restore of Windows servers.
- UPS Support: APC brand UPS with Network Management Cards are supported for graceful system shutdown.

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Snap Server 4500 Specifications

Physical
- Width: 16.8 in (426.7 mm)
- Height: 1.75 in (44.45 mm) 1U
- Depth: 23.75 in (603.3 mm)
- Weight: 28.0 lbs (12.7 kg)

Agency Certifications
- UL, cUL, CE, FCC Class A, C-Tick, Nemko, TuV, BSMI

Processor
- 1.6TByte: 3.0GHz Pentium 4 with 512KBytes L2 Cache and 533MHz Front-Side System Bus
- 1TByte: 2.4GHz Pentium 4 with 512KByte L2 Cache and 533MHz Front-Side System

Memory
- 3 DIMM Sockets Supporting up to 3GB DDR ECC RAM
- 512MBytes DDR ECC RAM Standard

Drive Configuration
- 4 Hot-Swappable ATA Drives
- 1TB (4 x 250GB)
- 1.6TB (4 x 400GB)

Network Interface
- Dual-Gigabit Ethernet Ports (autosensing 10/100/1000Base-T, dual RJ-45 network connectors)
- Support for stand-alone, failover, and load-balancing modes

Expansion Array Interface
- Optional Dual Port SATA Host Bus Adapter
- Supports up to 2 Snap Disk 10 Expansion Arrays[1]
- Supports up to 3 Snap Disk 30 Expansion Arrays

Local Backup Interface
- Ultra2 SCSI 68-pin VHDCI (standard)

Power
- Power Supply: Single 250W supply
- Power Rating: 250W 100-240 VAC, 50-60Hz, autosensing
- Input Current: 2.1A for 115VAC, 1.05A for 230VAC
- Power Consumption: 240W
- Heat Dissipation: 822 BTUs/hr

Environmental Limits, Operating
- Temperature: 50° F to 95° F, (10° C to 35° C)
- Non-Condensing Humidity: 20% to 80%
- Vibration: .10G at 10-300Hz random for up to 120 minutes
- Shock: 6 pulses of 33G for up to 2ms
- Altitude: 0 ft to 10,000 ft (0 m to 3,048 m)

Environmental Limits, Non-operating
- Temperature 14° F to 149° F, (-10° C to 65° C)
- Non-Condensing Humidity: 5% to 95%
- Vibration: 2G at 5-500Hz for up to 90 minutes
- Altitude: 0 ft to 35,000 ft (0 m to 10,668 m)

1. SATA HBA sold separately. Intial expansion array requires purchase of SATA Card.

Worldwide Warranty

Snap Server hardware and software are backed by world-class service and support to protect your investment from downtime. With Adaptec services, you have complete peace of mind.

Standard services with the Snap Server 4500 include:
- Three-year limited hardware warranty
- 90-day software support

Optional Support Programs

Today's mission-critical environments require maximum uptime and rapid resolution should problems arise. Adaptec provides a comprehensive suite of service and support upgrade options created to help you protect your business operations. Providing additional levels of technical service and support, Adaptec services extends the standard protection packages already included with all Adaptec products, including the market-leading Snap Server products. From extending your warranty phone support to complete onsite support for same day recovery, you can select the level of support that best fits your business and resource requirements.

For more information about Adaptec services, please contact your distributor. Or, call Adaptec at 1-800-442-7274 or visit us online at **http://www.adaptec.com/target/servicereg.html**

Models	Part Number
Snap Server 4500 1TB	5325301580
Snap Server 4500 1.6TB	5325301846
Snap Server 4500 2TB (includes controller and 1TB SD 10)	5325301841
Snap Server 4500 3TB (includes controller and 2 1TB SD 10s)	5325301842
Accessories	
Snap EDR (Enterprise Data Replicator)	5325301861
S2S (Server-to-Server) Synchronization v2	5325301829
Spare 4500 (1TB model)/SD 10 Hard Drive	5325301651
Spare Hard Drive (1.6TB model)	5325301905
Additional 512MB RAM	5325301590
Additional 1GB RAM	5325301591
Rackmount Slide Rail Kit	5325301585
Spare 4500/SD 10 Power Supply	5325301582
Spare 4500/SD 10 Fan Kit	5325301836
SCSI Card for Local Tape	5325301589
Snap Disk 10	
SD 10 1TB Expansion Array	5325301627
SD 10 Controller Card	5325301642
Spare SD 10 Interconnect Cable	5325301635
Snap Disk 30	
SD 30 2TB	5325301891
SD 30 4TB	5325301696
Spare SD 30 Power Supply	5325301700
Spare SD 30 Controller	5325301701
Spare SD 30 Drive	5325301702
Spare SD 30 Cable Set	5325301704

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